



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

08/458,019

06/01/1995

ERIC A. JOHNSON

090805-05340001

2660

78018

7590

08/17/2009

MDIP LLC

POST OFFICE BOX 2630

MONTGOMERY VILLAGE, MD 20886-2630

EXAMINER

LILLING, HERBERT J

ART UNIT

PAPER NUMBER

1657

MAIL DATE

DELIVERY MODE

08/17/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 08/458,019	Applicant(s) JOHNSON ET AL.	
	Examiner HERBERT J. LILLING	Art Unit 1657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1657

1. Receipt is acknowledged of a response filed June 20, 2009.
2. Claims 25-34 are pending in this application.

Claim 1-24 have been cancelled.

3. The rejection of Claims 25 and 30-34 under 35 U.S.C. 103(a) as being unpatentable over Johnson et al "Phaffia Rhodozyma as an Astaxanthin source in Salmonid Diets" Aquaculture 1980 Volume 20 Issue 2, pages 123-134 have been withdrawn in view of the persuasive arguments.

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, **but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s)**. See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 25-34 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 of U.S. Patent No. 5,679,567 or claims 1-3 of U.S. Patent 5,599,711 or claim 1 of U.S. Patent 5,356,810 .

Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 25 as recited:

Art Unit: 1657

“ An astaxanthin mutant *Phaffia rhodozyma* producing more astaxanthin than naturally occurring *Phaffia rhodozyma*, said mutant producing more than 700 micrograms of astaxanthin per gram of dry yeast per six-day culture in YM medium, wherein the amount of astaxanthin is determined by measuring the absorbance at 474 nanometers of a petroleum ether extract of *Phaffia rhodozyma* using a 1% (w/v) extinction coefficient in a one centimeter cuvette of 2100.”

A) Wherein Claims 1 and 2 **U.S. 5,679,567** are considered to be within the scope of the broad claims of having the same strain of *Phaffia rhodozyma* produces the same amount of astaxanthin as recited:

1. An isolated pure culture of a strain of *Phaffia rhodozyma* which when .grown under conditions comprising an oxygen transfer rate of at least 30 mmoles/1/hour on YM medium at 20.degree.-22.degree. C. for 5 days in 500 ml shake flasks with two baffles containing 50 ml of the medium and subjected to orbital shaking at 150 rpm, produces astaxanthin in an amount of at least 600 .mu.g per g *Phaffia rhodozyma* dry matter, as determined by HPLC analysis.

2. The culture according to claim 1 wherein said strain produces astaxanthin in an amount of at least 700 .mu.g per g of *Phaffia rhodozyma* dry matter.

If there are any differences, these differences would have been prima facie obvious to one of ordinary skilled in the art to produce the same amount of astaxanthin for the claim species absent a showing that there is a patentable difference.

B) Wherein Claims 1 ,2 and 3 of **U.S. 5,599,711** are considered to be within the scope of the broad claims of having the same strain of *Phaffia rhodozyma* produces the same amount of astaxanthin as recited:

1. An isolated pure culture of a strain of ***Phaffia rhodozyma*** which when grown under conditions comprising an oxygen transfer rate of at least 30 mmoles/1/hour on **YM medium** at 20.degree.-22.degree. for 5 days in 500 ml shake flasks with two baffles containing 50 ml of the medium and subjected to orbital shaking at 150 rpm, produces **astaxanthin** in an amount of at least 600 .mu.g per g ***Phaffia rhodozyma*** dry matter, as determined by HPLC analysis, wherein said strain is

Art Unit: 1657

Phaffia rhodozyma deposited under accession No. 224-87 CBS, or a mutant thereof which retains the **astaxanthin**-producing capability.

2. An isolated pure culture of a strain of **Phaffia rhodozyma** which when grown under conditions comprising an oxygen transfer rate of at least 30 mmoles/1/hour on **YM medium** at 20.degree.-22.degree. for 5 days in 500 ml shake flasks with two baffles containing 50 ml of the medium and subjected to orbital shaking at 150 rpm, produces **astaxanthin** in an amount of at least 600 .mu.g per g **Phaffia rhodozyma** dry matter, as determined by HPLC analysis, wherein said strain is **Phaffia rhodozyma** deposited under accession No. 225-87 CBS, or a mutant thereof which retains the **astaxanthin**-producing capability.

3. An isolated pure culture of a strain of **Phaffia rhodozyma** which when grown under conditions comprising an oxygen transfer rate of at least 30 mmoles/1/hour on **YM medium** at 20.degree.-22.degree. for 5 days in 500 ml shake flasks with two baffles containing 50 ml of the medium and subjected to orbital shaking at 150 rpm, produces **astaxanthin** in an amount of at least 600 .mu.g per g **Phaffia rhodozyma** dry matter, as determined by HPLC analysis, wherein said strain is **Phaffia rhodozyma** deposited under accession No. 215-88 CBS, or a mutant thereof which retains the **astaxanthin**-producing capability.

And

C) Wherein Claim 1 of U.S. 5,356,810 is considered to be within the scope of the broad claims of having the same strain of **Phaffia rhodozyma** produces the same amount of **astaxanthin** as recited:

1. An isolated pure culture of a strain of **Phaffia rhodozyma** which when grown under conditions comprising an oxygen transfer rate of at least 30 mmoles/1/hour on **YM medium** at 20.degree.-22.degree. C. for 5 days in 500 ml shake flasks with two baffles containing 50 ml of the medium and subjected to orbital shaking at 150 rpm, produces **astaxanthin** in an amount of at least 600 .mu.g per g **Phaffia rhodozyma** dry matter, as determined by HPLC analysis, wherein said strain is **Phaffia rhodozyma** deposited under accession No. 224-87 CBS, accession No. 225-87 CBS, or accession No. 215-88 CBS, or a mutant thereof which retains the **astaxanthin**-producing capability.

Art Unit: 1657

The claims of this instant application drawn to "An isolated pure culture of a strain of *Phaffia rhodozyma* .." are within the scope of patented claims to the three above Fleno et al patents whereby the conflicting patents and the instant application have one inventor in common which requires this double patenting of the obvious type. The earlier patent to Fleno et al, with a date of April 15, 1988 in view of priority of the national application based on the PCT/DK88/00068 according to US patent system records.

5. **No claim is allowed.**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HERBERT J. LILLING whose telephone number is 571-272-0918. The examiner can normally be reached on WORK AT HOME MAXIFLEX.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JON WEBER can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

H.J.Lilling: HJL

(571) 272-0918

Art Unit **1657**

August 14, 2009

/HERBERT J LILLING/
Primary Examiner Art Unit 1657